

CLAIMS

1. An optical head for reading and/or writing data from/on a storage medium having at least two tracks with
5 mutually different reflectances, the optical head comprising:
a light source;
an objective lens for focusing light, which has been emitted from the light source, onto one of the tracks of the storage medium;
10 light receiving means including: a plurality of light receiving areas, which receive a first type of reflected rays where zero-order and first-order components of the light diffracted by the track are superposed one upon the other to generate a light quantity signal representing quantity of
15 light of the first type of reflected rays; and a non-light-receiving area, which is provided between the light receiving areas so as not to receive a second type of reflected ray consisting essentially of the zero-order components, wherein as measured in a first direction in which the light receiving
20 areas are arranged, a gap between the light receiving areas is

longer than a width of the non-light-receiving area; and

tracking error signal generating means for generating a tracking error signal based on the light quantity signal.

5 2. The optical head of claim 1, wherein as measured in a second direction perpendicular to the first direction, the length of the light receiving areas is smaller than the width of the first type of reflected rays.

10 3. The optical head of claim 2, wherein as measured in the second direction, the overall length of the light receiving areas is greater than the diameter of a luminous flux of reflected rays.

15 4. The optical head of claim 2, wherein if the light source radiates light with a wavelength λ , the objective lens has a numerical aperture NA and the track has a period T, the optical head reads and/or writes data from/on a storage medium that satisfies the inequality:

20 $0.44 < \lambda / (NA \cdot T) - 1$

(11)

5. The optical head of claim 1, further comprising light splitting means for splitting a luminous flux of reflected rays into the first and second types of reflected rays.

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6. A drive for making an optical head read and/or write data from/on a storage medium having at least two tracks with mutually different reflectances, the optical head comprising:

a light source;

10 an objective lens for focusing light, which has been emitted from the light source, onto one of the tracks of the storage medium;

light receiving means including: a plurality of light receiving areas, which receive a first type of reflected rays where zero-order and first-order components of the light diffracted by the track are superposed one upon the other to generate a light quantity signal representing quantity of light of the first type of reflected rays; and a non-light-receiving area, which is provided between the light receiving areas so as not to receive a second type of reflected ray

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consisting essentially of the zero-order components, wherein as measured in a first direction in which the light receiving areas are arranged, a gap between the light receiving areas is longer than a width of the non-light-receiving area;

5 tracking error signal generating means for generating a tracking error signal based on the light quantity signal; and

shifting means for changing the position of the lens parallel to the tracks responsive to a drive signal,

wherein the drive further includes:

10 control signal generating means for generating a control signal that controls the position of the lens such that the light follows the tracks of the optical disc on the storage medium in response to the tracking error signal, and

driving means for generating the drive signal that drives
15 the shifting means in response to the control signal.